

Case Report

Pseudophacocele following a Bicycle Handle Injury: A Case Report

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Abstract

Background: Pseudophacocele is a rare complication of blunt trauma in pseudophakic eyes. **Case:** We present a case of 60-year-old male who presented with pseudophacocele after injury from a bicycle handle. On presentation, visual acuity in the right eye was perception of light (PL) in 2 quadrants (superior and temporal) and left eye was 20/20. A PCIOL was seen superonasally in the right subconjunctival space with total hyphaema. Ultrasound demonstrated vitreous haemorrhage with membranes in right eye. We describe the surgical management and further clinical course of the patient. **Conclusion:** It is imperative to surgically manage these challenging cases. Despite optimum care visual outcomes are guarded in patients with severe blunt trauma.

Key words: injury; pseudophacocele; endophthalmitis; blunt trauma

Introduction

Blunt trauma to pseudophakic eyes can lead to displacement of the intraocular lens into the vitreous cavity, anterior chamber, suprachoroidal space, subconjunctival space or even outside the eye.(Biedner et al., 1977, Bene and Kranias, 1985, Foster et al., 1990, Sandramouli et al., 1993, Kumar et al., 2002, Chandravanshi et al., 2015, Bawankar et al., 2018) Displacement of the intraocular lens into the subconjunctival space has been termed as a pseudophacocele. With a total of less than 15 cases reported worldwide, it is imperative to differentiate this condition from phacocele, which is traumatic dislocation of the crystalline lens into the subconjunctival cavity. (Bhattacharjee et al., 2007) It is an

emergency situation with risk of development of endophthalmitis.(Narang and Agarwal, 2017) Due to the rarity of the clinical condition data on visual outcomes in patients with pseudophacocele is limited. Early intervention, has been however shown to improve visual outcomes in such patients. (Narang and Agarwal, 2017)

Case Report

We describe a case of 60-year-old male who presented with complaints of decreased vision following injury with bicycle handle to the right lower lid 2 months back. He had undergone cataract surgery 3 years back with poly-methyl methacrylate (PMMA) posterior chamber intraocular implantation (PCIOL) in the right eye. On examination, right eye showed ecchymosis. The visual acuity in right eye had perception of light (PL) in 2 quadrants (superior and temporal) and visual acuity in the left eye was 20/20. A PCIOL was seen superonasally in the right subconjunctival space (Figure 1A). Total hyphaema obscured

Financial interest: Nil

Conflict of interest: Nil

Received: 26.10.2017

Accepted: 30.12.2017

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anterior segment and posterior segment details for right eye (Figure 1B). Intraocular pressure in the right eye was 6mm Hg and in the left eye 14mmHg on non-contact tonometry. Anterior and posterior segment evaluation in the left eye was unremarkable. B scan USG of the right eye showed vitreous haemorrhage with membranes (Figure 1C). A 3mm scleral laceration was seen 1 mm away from the limbus at 1 o'clock. Surgical intervention was done to remove the PCIOL, drain the hyphaema and repair the sclera laceration, in

order to restore the anatomical integrity of the eye (Figure 1D). Vision improved to PL with inaccurate projection of rays. There was no vitreous incarceration in the wound. Pars plana vitrectomy with scleral fixation of IOL was planned for a second sitting after 1 month. The patient underwent the procedure but final visual acuity remained PL with inaccurate projection of rays after 6 months follow up. The intraocular pressure was 10 mmHg at last visit and the posterior segment showed disc pallor with a normal cup/disc ratio.

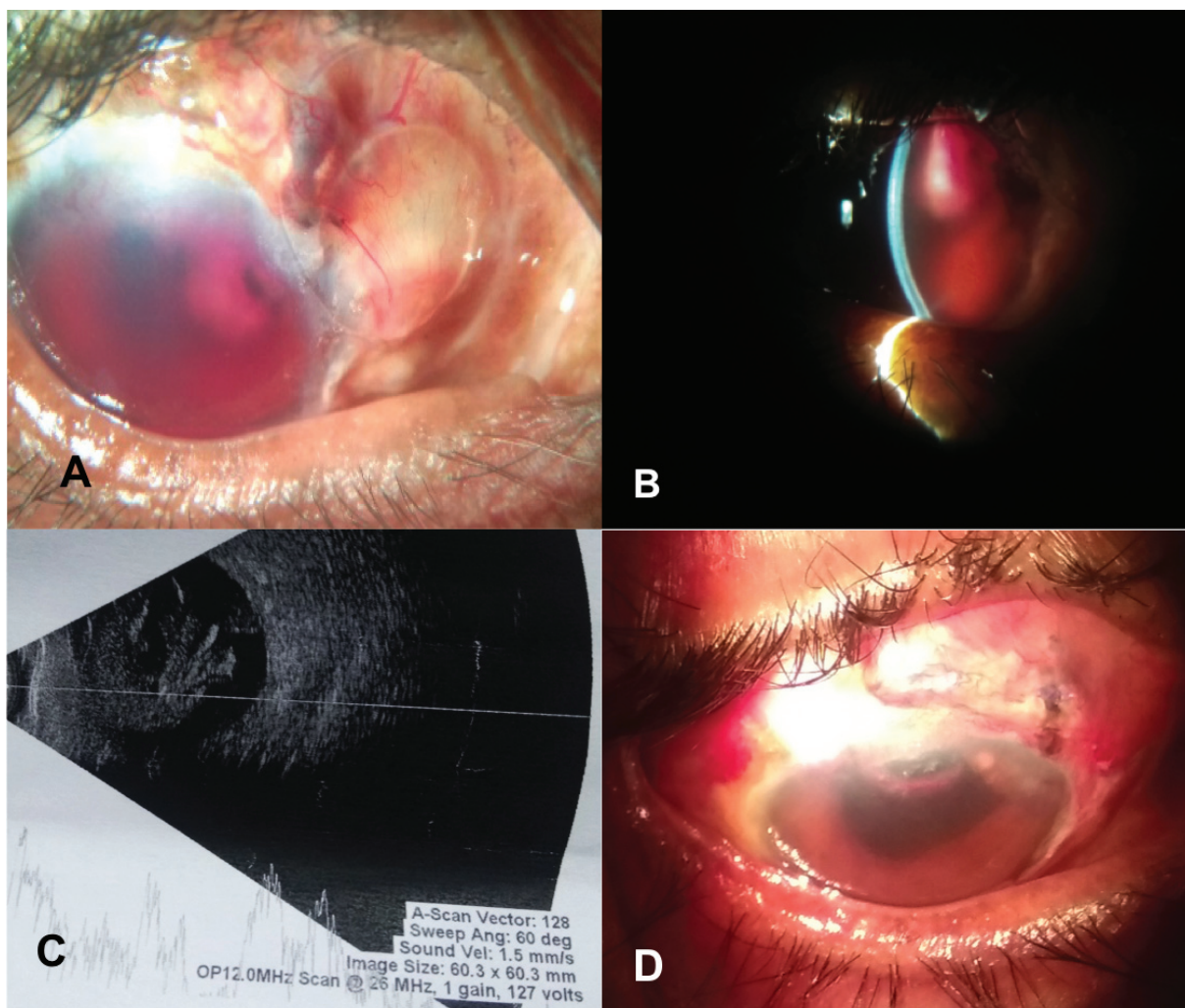


Figure 1A: Diffuse illumination Slit Lamp photograph showing the PCIOL in subconjunctival space

Figure 1B: Total hyphaema

Figure 1C: B Scan USG showing vitreous haemorrhage and membranes in the vitreous cavity

Figure 1D: Post scleral repair and hyphaema drainage

Discussion

Pseudophacocele was first described in a patient who underwent uncomplicated intracapsular cataract surgery with iris clip lens implantation by Biedner et al. in 1977.(Biedner et al., 1977)

Subconjunctival dislocation is a rare complication of trauma in pseudophakic eyes. The management depends on time of presentation, ocular inflammation, infection, posterior capsule status, vitreous loss, condition of the iris, retinal detachment, and associated intraocular damage.(Bandyopadhyay et al., 2004, Bolling et al., 1986, Rao et al., 2010, Agrawal et al., 2012) Our patient presented very late (2 months post trauma) therefore visual prognosis was guarded. Several authors have reported good visual outcomes after primary repair, pars plana vitrectomy (PPV) and IOL implantation or aphakic correction. (Biedner et al., 1977, Bene and Kranias, 1985, Kumar et al., 2002, Sandramouli et al., 1993, Bandyopadhyay et al., 2004) Irrespective of the time of presentation it is absolutely essential to remove the PCIOL and repair the scleral wound in order to minimise the risk of endophthalmitis and its sequelae in the affected eye. The visual outcomes hence depend on several factors such as the amount of vitreous loss, condition of the iris and uveal tissue, RD, associated intraocular damage, visual acuity at presentation and timing of presentation.(Rao et al., 2010, Agrawal et al., 2011) In the largest reported case series till date, good visual outcome (better than 0.33 Snellen's decimal equivalent) was reported in 3 out of the 5 cases. The authors performed a PPV with glued intrascleral haptic fixation of an IOL for all the cases as a single stage procedure. (Narang and Agarwal, 2017) This however is not possible in all cases, especially where the patients report late as in our case.

Conclusion

Pseudophacocele is a potentially devastating ocular condition post blunt trauma. Timing of

presentation seems to be a vital determinant of post-operative visual outcomes. Poor visual acuity with inaccurate projection of rays at presentation is another determinant of the final visual outcome. Thus in spite of adequate care the patient may progress to optic atrophy.

Disclosures: The article has not been presented in a meeting. The authors did not receive any financial support from any public or private sources. The authors have no financial or proprietary interest in a product, method, or material described herein.

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